



Food and Drug Administration  
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August 1, 2014

Nanjing Jusha Display Technology Co., Ltd.  
% Ms. Li Le  
Certification Manager  
8A, Block 1, Nanjing International Service  
Outsourcing Mansion, No. 301  
Hanzhongmen Street, Nanjing 210036  
CHINA

Re: K141690

Trade/Device Name: Jusha-M33C LCD Monitor  
Regulation Number: 21 CFR 892.2050  
Regulation Name: Picture archiving and communications system  
Regulatory Class: II  
Product Code: PGY  
Dated: June 24, 2014  
Received: June 30, 2014

Dear Ms. Le:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration. Please note: CDRH does not evaluate information related to contract liability warranties. We remind you, however, that device labeling must be truthful and not misleading.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); medical device reporting (reporting of medical device-related adverse events) (21 CFR 803); good manufacturing practice requirements as set

forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please contact the Division of Industry and Consumer Education at its toll-free number (800) 638 2041 or (301) 796-7100 or at its Internet address

<http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm>. Also, please note the regulation entitled, “Misbranding by reference to premarket notification” (21 CFR Part 807.97). For questions regarding the reporting of adverse events under the MDR regulation (21 CFR Part 803), please go to

<http://www.fda.gov/MedicalDevices/Safety/ReportaProblem/default.htm> for the CDRH’s Office of Surveillance and Biometrics/Division of Postmarket Surveillance.

You may obtain other general information on your responsibilities under the Act from the Division of Industry and Consumer Education at its toll-free number (800) 638-2041 or (301) 796-7100 or at its Internet address

<http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm>.

Sincerely yours,



for

Janine M. Morris  
Director  
Division of Radiological Health  
Office of In Vitro Diagnostics  
and Radiological Health  
Center for Devices and Radiological Health

Enclosure

## Indications for Use

510(k) Number (if known)

K141690

Device Name

JUSHA-M33C LCD Monitor

Indications for Use (Describe)

JUSHA-M33C LCD Monitor is intended to be used in displaying and viewing digital images for diagnosis of X-ray or MRI, etc. by trained medical practitioners. The device is not specified for digital mammography system.

Type of Use (Select one or both, as applicable)

☒ Prescription Use (Part 21 CFR 801 Subpart D)

☐ Over-The-Counter Use (21 CFR 801 Subpart C)

**PLEASE DO NOT WRITE BELOW THIS LINE – CONTINUE ON A SEPARATE PAGE IF NEEDED.**

### FOR FDA USE ONLY

Concurrence of Center for Devices and Radiological Health (CDRH) (Signature)



This section applies only to requirements of the Paperwork Reduction Act of 1995.

**\*DO NOT SEND YOUR COMPLETED FORM TO THE PRA STAFF EMAIL ADDRESS BELOW.\***

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## 510(k) Summary

In accordance with 21 CFR 807.92 the following summary of information is provided:

Date:	May 6, 2014
Submitter:	Nanjing Jusha Display Technology Co., Ltd Add: 8A, Block 1. Nanjing International Service Outsourcing Mansion, No. 301, Hanzhongmen street, Nanjing, China.
Contact Person:	Li le Certification Manager Nanjing Jusha Display Technology Co., Ltd Tel: +86-25- 83305050 Fax: +86-25- 58783271
Device Trade Name:	JUSHA-M33C LCD Monitor
Common/Usual Name:	3MP Monochrome LCD Monitor
Classification Name: Product Code:	Display, Diagnostic Radiology 21CFR 892.2050 PGY
Predicate Device(s):	EIZO GX340;K113784
Device Description:	<p>JUSHA-M33C LCD Monitor is the display system with the high resolution (2048*1536), high luminance (1000 cd/m<sup>2</sup>), and 1024 simultaneous shades of gray out of a palette of 4096, 10 DICOM look up table and 3 GAMMA look up table inside. JUSHA-M33C has ambient brightness adapting and presence induction system, with these this display can automatic adjustment according to different requirements in order to achieve the best results.</p> <p>The product is consisted of the following components:</p> <ul style="list-style-type: none"> <li>- 21.3inches, Mono-TFT LCD Panel</li> <li>- JUSHA- 45T motherboard/FR-4/REV:0.9</li> <li>- JUSHA-M33C LCD Monitor software</li> <li>- Power Adapter</li> <li>- Data Cable.</li> </ul> <p>The LCD Monitor is designed, tested, and will be manufactured in accordance with both mandatory and voluntary standards:</p> <ol style="list-style-type: none"> <li>1. IEC 60601-1 Medical equipment medical electrical equipment - Part 1: General requirements for basic safety and essential performance 2005+CORR.1(2006)+CORR.2(2007)</li> <li>2. IEC 60601-1-2 Edition 3:2007, Medical electrical equipment - Part 1-2: General requirements for basic safety and essential performance - Collateral standard: Electromagnetic compatibility - Requirements and tests.</li> </ol>

Intended Use:	JUSHA-M33C LCD Monitor is intended to be used in displaying and viewing digital images for diagnosis of X-ray or MRI, etc. by trained medical practitioners. The device is not specified for digital mammography system.
Technology:	JUSHA-M33C LCD Monitor is the display system with the high resolution monitor (3 megapixels) with electronic capabilities for evaluation of high resolution medical images, high luminance (1000 cd/m <sup>2</sup> ) and 1024 simultaneous shades of gray out of a palette of 4096, 10 DICOM look up table and 3 GAMMA look up table inside. In particular, JUSHA-M33C LCD Monitor contains CGA function, it is specially made by JUSHA, it can automatic identify gray and color signals, then gray area calls DICOM LUT and color area calls GAMMA2.2 LUT. JUSHA-M33C has ambient brightness adapting and presence induction system, with these this display can automatic adjustment according to different requirements in order to achieve the best results.
Determination of Substantial Equivalence:	<p><u>Summary of Non-Clinical Tests:</u></p> <p>The LCD Monitor complies with voluntary standards as following:</p> <ol style="list-style-type: none"> <li>1 IEC 60601-1 Medical equipment medical electrical equipment - Part 1: General requirements for basic safety and essential performance 2005+CORR.1(2006)+CORR.2(2007)</li> <li>2 IEC 60601-1-2 Edition 3:2007, Medical electrical equipment - Part 1-2: General requirements for basic safety and essential performance - Collateral standard: Electromagnetic compatibility - Requirements and tests.</li> </ol> <p>JUSHA-M33C is substantially equivalent to EIZO GX340. JUSHA-M33C employs the maximum resolution values same as that of EIZO GX340. Comparison table of the principal characteristics of 2 devices is shown in the Attachment 1.</p> <p>The following quality assurance measures were applied to the development of the system:</p> <ul style="list-style-type: none"> <li>• Risk Analysis</li> <li>• Requirements Reviews</li> <li>• Design Reviews</li> <li>• Raw materials verification</li> <li>• Testing on unit level (Module verification)</li> <li>• Integration testing (System verification)</li> <li>• Final acceptance testing (Validation)</li> <li>• Performance testing (Verification)</li> <li>• Safety testing (Verification)</li> </ul> <p><u>Summary of Clinical Tests:</u></p>

	<p>The subject of this premarket submission, LCD Monitor, did not require clinical studies to support substantial equivalence.</p> <p>The proposed device is Substantially Equivalent (SE) to the predicate device which is US legally market device. Therefore, the subject device is determined as safe and effectiveness.</p>
Conclusion:	Nanjing Jusha Display Technology Co., Ltd Considers the JUSHA-M33C LCD Monitor to be as safe, as effective, and performance is substantially equivalent to the predicate device(s).

## Attachment 1

Attributes	Predicate Device	Proposed Device
Product	EIZO GX340	JUSHA-M33C LCD Monitor
510(k) Number	K113784	K141690
Screen technology	21.3" Monochrome TFT LCD Panel	21.3inches, Mono-TFT LCD Panel
Viewing angle (H, V)	Horizontal 176°, Vertical 176°	Horizontal 176°, Vertical 176°
Resolution	2048 x 1536/1536x 2048	2048 x1536/1536x 2048
Display area	324.8 (H) x 433.1 (V) mm	325.00 (H) x 433.00 (V) mm
Contrast Ratio	1400:1	1400:1
Scanning frequency (H; V)	31~127 kHz; 29~61.5 Hz	96.7kHz; 60Hz
Recommended Luminance	500cd/m <sup>2</sup>	500cd/m <sup>2</sup>
Pixel Pitch	0.2115x0.2115 mm	0.2115x0.2115 mm
Backlight	LED	LED
DICOM LUT	10-bit (Display Port) : 1024 8-bit: 256	4096
Luminance calibration	Built in calibration sensor provided	Built in calibration sensor provided
Input signals	DVI standard 1.0, DisplayPort 1.1a	DVI standard 1.0, DisplayPort 1.1a
Input terminational	DVI-D (dual link) x 1, DisplayPort x 1	DVI-D (dual link) x 1, DisplayPort x 1

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Display controller	Off the shelf	Off the shelf
Power Requirement	AC 100~240V 50~60Hz	AC 100~240V 50~60Hz
Power Consumption/Save Mode	36W/less than 1.6W	45W/less than 3W
Power Management	DVI DMPM DisplayPort 1.1a	DVI DMPM DisplayPort 1.1a
USB Ports/standard	1 upstream (endpoint), 2 downstream/ Rev. 2.0	1 upstream (endpoint), 2 downstream/ Rev. 2.0
Dimensions w/o stand (W x H x D)	Without stand: 376mmx505mmx98mm With stand: 376mmx599mmx245.5 mm	Without stand: 382mm x490mm x75mm With stand: 382mm x533mm x238mm
Applicable standard	1 IEC 60601-1 Medical equipment medical electrical equipment - Part 1: General requirements for basic safety and essential performance 2005+CORR.1(2006)+CORR.2(2007) 2 IEC 60601-1-2 Edition 3:2007, Medical electrical equipment - Part 1-2: General requirements for basic safety and essential performance - Collateral standard: Electromagnetic compatibility - Requirements and tests.	1 IEC 60601-1 Medical equipment medical electrical equipment - Part 1: General requirements for basic safety and essential performance 2005+CORR.1(2006)+CORR.2(2007) 2 IEC 60601-1-2 Edition 3:2007, Medical electrical equipment - Part 1-2: General requirements for basic safety and essential performance - Collateral standard: Electromagnetic compatibility - Requirements and tests.